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ABSTRACT

This study examined the ways that workplace contexts influenced the extent to which faculty work behavior is congruent with the mission of the university. Structured observations of six faculty at a research university and six faculty at a comprehensive university were conducted during 1994 and 1995. Each faculty member was observed on five non-consecutive work days, and information on work done after regular working hours or off campus was also collected. Interviews were also conducted with other faculty and administrators. It was found that the work patterns observed in the physics department at the research university and the English department at the comprehensive university were reasonably congruent with the sense of mission communicated by administrators. In contrast, the work patterns of faculty in the research university's English department and the comprehensive university's physics department seemed incongruent with the missions of their universities. At the English department, the mode of conducting inquiry and the nature of graduate student training conflicted with the apprenticeship model of graduate student training articulated by administrators, while at the physics department the emphasis on faculty and student research conflicted with the service teaching responsibilities of faculty. (Contains 34 references.) (MDM)

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***MISSION IMPLAUSIBLE:
CONGRUENCE OF FACULTY WORK
WITH UNIVERSITY MISSION***

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MISSION IMPLAUSIBLE: CONGRUENCE OF FACULTY WORK WITH UNIVERSITY MISSION

The century-old debate about conflict between faculty teaching and research has been revived in the 1980s and 1990s by higher education critics who are concerned that faculty are neglecting students to pursue rewards for research (Smith, 1990; Sykes, 1988). As a result, critics charge faculty work is incongruent with the educational missions of their universities. Some policy makers also assert that universities must encourage faculty to devote more attention to undergraduate education. They suggest that administrators implement incentive policies to induce faculty realign their personal goals and hence their work behaviors with institutional priorities (Mingle, 1993).

When one considers only stated goals, the situation may not be as dire as some critics and policy makers suggest. Previous research has found a high degree of congruence between administrators' and faculty members' responses to survey questions regarding appropriate goals for their institutions (Peterson & Uhl, 1977; Romney, 1978; Smart, 1975). In addition, according to a recent national survey, faculty and administrator attitudes about the balance between teaching and research are quite similar (Gray, Froh & Diamond, 1992). However, researchers have yet to investigate the extent to which faculty work *behavior* is congruent with the goals and missions of the universities where they are employed.

Of course, many factors may intervene between the formal mission and goals of a university and the work behavior of the faculty who work at the university. Previous research about work in higher education and other types of organizations suggest that many factors operative in their workplace contexts influence the ways that faculty allocate time and effort to purposes of work. Intervening factors such as reward policies (Fairweather & Rhoads, 1995), availability of resources (Peters & O'Connor, 1980), evaluation and work assignment policies (Dill, 1986, Hind, Dornbusch & Scott, 1974) the behavior and expectations of co-workers (Maehr & Braskamp, 1986), and disciplinary knowledge and social structures (Becher, 1989; Latucca & Stark, 1994) may influence the ways faculty engage in research & teaching.

This paper reports the results of a study designed to improve understanding of the ways that factors of their workplace contexts influence the extent to which actual faculty work behavior is congruent with the missions of the universities where they are employed.

DEFINING MISSION, PURPOSES, GOALS & ACTIVATES

Any attempt to discover a relationship between university mission and faculty work behavior is complicated by the lack of commonly accepted definitions for those concepts. Furthermore, the concept of "mission" is often confounded with the "goals," "purposes" of universities. I draw on business and higher education literatures to generate definitions for this paper.

Mission, Purposes & Goals

Since universities are non-profit organizations, financial profit or loss is not considered the measure of their success. Instead, effectiveness is best assessed by how well they fulfill their missions (Augsberger, 1992). Several management and higher education scholars define mission in terms of purpose. For example, Tuckman and Chang (1988) equate mission and purpose as the "statement of educational philosophy which provides a long term sense of institutional identity." They suggest that mission and purposes are not equivalent to goals, but rather mission and purposes guide the selection of goals. According to Collins and Porras (1991), purpose is the fundamental reason for an organization's existence. The core purposes of colleges and universities were outlined by the American Association of University professors in 1915:

- ❖ To promote inquiry and advance the sum of human knowledge,
- ❖ To develop general instruction to the students, and
- ❖ To develop experts for the various branches of the public service.

The explicit or implicit missions of most universities still include the purposes of research, teaching, and service. However, while most universities share these purposes, the relative value given to each purpose varies by university in intent and in practice. Moreover, the ways that universities define and interpret "research," "teaching," and "service" vary. Pearce (1982) points out that each organization's mission should indicate its uniqueness; he defines

mission as an “enduring statement of purpose that distinguishes one business from other similar firms.”

For this paper, then, I consider the three primary *purposes* of a university to be research, teaching, and service. For clarity in this study, I subdivided teaching into two purpose categories: undergraduate education and graduate education. I also subdivided service into two purpose categories: administration (service within the university), and service (public or professional service external to the university). An individual university’s *mission* reflects the relative importance placed each purpose and the unique ways that the university seeks to fulfill each purpose. *Goals* are the means by which a university works to achieve mission and purpose. Goals may (or may not) be translated into specific policies and resource allocation decisions.

Activities

I define faculty members’ work activities in terms of three factors: (1) the *purposes* which are accomplished by doing the activity, (2) the specific *action* performed, and (3) the *actual allocation* of time to one or more different purposes and actions. An example of a faculty work activity is when a professor drafts a lecture outline for a lower division physics course from 9:00 to 9:20 a.m. In this example, the purpose is teaching (specifically undergraduate education), the action is class preparation, and the time allocation is 20 minutes.

I start from the standpoint that the teaching, research and service purposes of faculty work may be complementary and mutually reinforcing. Faculty sometimes engage in activities that accomplish more than one purpose of work at the same time (Colbeck, 1995). I define a single activity as *integrated* if the activity accomplishes more than one purpose. An example of an integrated activity is when a professor coaches two graduate student teaching assistants from 4:30 to 5:05 p.m. about how to relate the graduate TA-led discussion sections to the professor’s lectures. In this example, the purposes are graduate education and undergraduate education. The action related to graduate education is informal teaching; the action related to undergraduate education is holding a meeting. The time allocation is 35 minutes.

THEORETICAL PERSPECTIVES ABOUT MISSION

Although there has been little empirical investigation of the extent of congruence between university mission and faculty behavior, several theories suggesting reasons for congruence or incongruence been discussed in the higher education literature. Higher education scholars have discussed the concept of university mission from four alternative perspectives: goal-directed planning, symbolic planning, values discrepancies in planning, and disciplinary and organizational fragmentation. I discuss these perspectives and their possible implications for practice.

Missions as the Focus of Goal-directed Planning

The first perspective, posits a model of rational choice and considers mission as the definition of the scope and purpose of a university's activities. Clear statements of university goals and priorities become guidelines for planning and the means to achieve correspondence between institutional goals and activities of departments and individuals (Levin, 1991). Goal-directed planning focuses on the development and implementation of incentives that will appeal to faculty members' self-interest and induce them to adopt their universities' goals as their own (Berg, 1985).

According to this perspective, the more clearly stated and public the mission and the more incentive policies are aligned with mission, the more faculty work will be congruent with mission. If the mission is not clearly stated or if incentive policies are inconsistent with mission, faculty are more likely to pursue their own individual goals.

Missions as Symbolic Plans

An alternative perspective derived from the metaphor of universities as "organized anarchies" suggests that linkages are loose between universities' stated goals and implementation of those goals by individuals within the university (Meyer & Rowan, 1977). The conditions required for goal-directed planning, including clarity about goals, agreement about the basic technology of the organization, and continuity of leadership, are rarely found in universities. Instead, universities operate with a of a variety of inconsistent and ill-defined preferences and with little coherent structure (Cohen & March, 1986). Missions and related long-range plans are useful as symbols. They signify that the university conducts the rational

management process that insiders and outsiders expect even though such a process may have little or no functional effect on university operations.

According to this theoretical perspective, then, even a clearly articulated mission will have little influence *a priori* on faculty work behavior. The direct rewards for establishing a clear mission and goals are low (Cohen & March, 1986). Therefore in practice, congruence between stated university mission and goals and faculty behavior is likely to be random.

Values Discrepancies between Formal Planning and Policies

The values discrepancy perspective is similar to the mission as symbol perspective because it also suggests that universities' stated missions may have little effect on faculty work behavior. In contrast to the mission as symbolic plan perspective, however, the values discrepancy perspective asserts that this is not a random occurrence. The values discrepancy perspective is similar to the goal-directed planning perspective because it implies the importance of consistency between stated mission and organizational policies. However, the values discrepancy explores in more detail the consequences of inconsistency. Mission and explicit public statements by administrators may emphasize education and talent development. But implicit values emphasizing resources and reputation too often actually drive university policies and individual actions (Astin, 1989).

According to this perspective, if there is conflict between explicit and implicit missions of a university, faculty work behavior is more likely to be influenced by the implicit than the explicit mission. When interviewing faculty, Burton Clark (1987) found that faculty who worked in comprehensive universities with unclear missions and multiple demands felt more frustrated and had a less well-defined sense of purpose than faculty who worked in research universities where Clark perceived there were with clear missions. Fairweather (1993) also found more inconsistency between stated goals and policies at comprehensive than at research universities. At comprehensive colleges, department chairs said that teaching was more important; however, faculty received higher salary increases for research productivity. Fairweather found that while faculty at research universities were also paid more for their research, their department chairs agreed that research was more important. When mission and incentive policies are inconsistent, faculty are less likely to know the official mission and

purposes of their organizations. If they do know what the official mission is, they are less likely to believe it is important and relevant to their own work behavior. Their behavior is likely to be incongruent with stated mission, and to be congruent with reward policies, resource allocation decisions, and prevailing organizational norms and values. Individuals who act in accordance with the explicit mission are likely to become demoralized (Astin, 1989).

Disciplinary Fragmentation of Mission

Several higher education scholars have noted another reason why some faculty work behavior may be inconsistent with university missions: while faculty perform their work within the organizational contexts of their universities, they also work within the professional contexts of their disciplines (Clark, 1987; Light, 1974). The structure of intellectual tasks and modes of social interaction around the generation and dissemination of knowledge are important elements of faculty members' disciplinary workplace contexts that cause variation in the ways that faculty teach (Donald, 1983, Latucca & Stark, 1994) and conduct research (Becher, 1989).

The disciplinary fragmentation perspective suggests that not only do disciplinary differences make consensus on university mission and goals problematic (Rugg, Warren & Carpenter, 1981), but faculty work behavior may be influenced more by disciplinary values than by organizational mission. The more prestigious the university, the more that faculty work behavior will reflect the incentives, norms and values of their disciplines rather than the mission and goals of their universities (Clark, 1987).

METHODS

Previous quantitative research indicates that university and disciplinary contexts affect faculty work. However, qualitative methods are necessary to improve understanding of how university mission and other elements of workplace contexts affect the ways that faculty fulfill purposes of their work. I conducted case studies of twelve faculty members in four academic departments. The primary unit of analysis is the individual faculty member.

Sample and Data Collection

I selected four departments for organizational and disciplinary variation. Differences in governance structure guided selection of universities. To understand how mission influences on faculty work might be affected by institutional type, I conducted this study at one research university, Vantage University, and one comprehensive university, Metropolitan State University. (Both institution names are pseudonyms.) Differences in knowledge structure guided selection of disciplines. To understand how faculty perceptions of mission and faculty work activities might vary by discipline, at each university I conducted research in one "hard discipline," physics, and one "soft discipline," English (Becher, 1989).

I collected data about mission and other elements of university, departmental, and disciplinary contexts from site documents (catalogs, published speeches by top administrators, newspapers, faculty handbooks), and from interviews with faculty members in each department, their department chairs, and their academic deans. I conducted interviews between May 1993 and June 1994 with seven to eight tenured faculty in each of the four departments. During the one-to-two hour interviews, I asked faculty to tell me about aspects of their university, disciplinary, and departmental work environments that influence what they do and how they do it. They shared their impressions of how their work contexts affected all faculty in their department and themselves in particular. The interview protocols used to guide the conversations included prompts for faculty to discuss mission, governance, policies, resources, norms, values, decision making processes, and communication patterns within their work contexts.

I asked the administrators to tell me about the missions of their universities, their principle roles as administrators, and to describe the authority they had over the work of faculty. I also asked the deans to indicate the proportion of time that faculty members under their purview were expected to allocate to the following purposes of work: undergraduate education, graduate education, research, administration, service, and administration. If the deans also expected faculty to integrate purposes of work (e.g., to fulfill more than one purpose of work at a time), I asked the deans to estimate the extent of desired integration.

Between February 1994 and January 1995, I conducted structured observations of the work activities of a subset of twelve faculty members in the interview sample: three members in each of the four departments. Because of the small number of faculty, I attempted to limit variance in faculty demographic characteristics to the issues salient to the research questions, university type and discipline. Therefore, I controlled for rank. All twelve faculty were full professors in the prime of their careers. None were considering retirement within the next five years. I also controlled for race and gender. Because there were a total of three women and minorities across both physics departments, I only asked white men to participate in the observation phase of the study. I observed the work of the twelve faculty on five non-consecutive work days each for a total of 60 days, or 442.5 hours. During the observations, I documented the types, purposes, duration, and extent of integration of faculty activities. I observed the work of each faculty member across days of the week, across beginning, middle and end of terms, and across more than one term. I also collected information about work activities done by the faculty members at home, after "regular" working hours, or off campus in detailed interviews with the faculty members within 24 hours of their occurrence on scheduled "observation days." The data includes 587.2 hours of such immediately reported activities. Table 1 presents the proportion of total time that each of the twelve professors integrated purposes of work during periods that I observed their work activities and during periods that they reported their work activities to me.

While structured observations and short term self-reports of activities illuminated faculty behavior, in-depth interviews with faculty allowed me to place their behavior in context and to understand the meanings faculty make of their own purposes and actions (Seidman, 1991). Initial interviews elicited details of the faculty members' training and background. Final interviews, conducted after completing all five observations, elicited faculty members' beliefs about their own capabilities, beliefs about how their work contexts supported or constrained their goals, and the extent to which faculty believed their personal goals matched those of their universities.

Analysis

For each of the four departments in this study, I completed a five-step process to assess extent of congruence of faculty work with mission. First, I determined if an official mission statement existed and if it was articulated publicly. Second, I analyzed responses to interview questions to understand how the deans and chairs perceived mission. Third, I assessed the extent to which other elements of organizational work contexts discussed during interviews were coherent with the explicit or implicit mission. Fourth, I examined faculty allocation of time to purposes of work in relation to university mission. Finally, I analyzed interview responses by observed faculty and their department colleagues to understand how faculty made sense of their activities in relation to their perceptions of mission.

<i>TABLE I</i> <i>Proportion of Total Recorded Time that</i> <i>Faculty Integrated Two or More Work Purposes</i>	
<i>Metro State Physics</i>	
Hank Powell	39.7
Gary Byrne	47.0
Ryan Neumann	25.5
<i>Metro State English</i>	
Aaron Chase	60.0
Darryl Allen	39.5
Mike Easton	45.0
<i>Vantage Physics</i>	
Sam Youngman	34.7
Paul Zepeda	32.5
Ted Klein	49.5
<i>Vantage English</i>	
Rich Jeffers	33.5
Jim Gabriel	19.0
Blake Saxon	36.8

Validity and Limitations

The extent to which the data about faculty work activities obtained for this study are accurate is an issue of internal validity. In studies of faculty work, according to Yuker, validity is the “degree to which the report corresponds to the way time was actually spent” (Yuker, 1984:25). When it comes to validity of time reports, surveys are the least accurate method, diaries or work logs are better, and “data obtained from work sampling should probably be considered the most valid” (Yuker, 1984:25). I sampled full days in the work lives of faculty members.

Observer effect on work activities is also an issue that might have affected the internal validity of this study. Internal validity would have been threatened to the extent that faculty modified their activities when I was observing them. Evidence that my presence had minimal effect on faculty work came from three sources. First, professors talked to me only 4.5% of the total amount of time recorded for all participants in this study, and 1.9% of that time, they were also accomplishing purposes of work. Second, a few of the activities I observed were not exemplary; faculty were comfortable enough with my presence to engage casual conversations or attend to personal affairs. Finally, during our last interviews, several of the faculty volunteered that my presence had not changed their work patterns.

The extent to which findings can be applied to other faculty, institutions, or disciplines is an issue of external validity. To address concerns about external validity, I have provided detailed description, clarified the limitations of my sample, and conducted cross-case analyses. The following analysis includes rich details about the particular faculty I observed and the particular universities, disciplines, and departments within which they worked. Therefore, the reader interested in applying the analyses to other individuals and contexts has enough information to judge which findings are transferable to a new situation (Lincoln & Guba, 1985). Specifically, I have made it clear that faculty selected for the case studies are not a representative sample of a population of faculty in terms of their background characteristics. They are white male full professors at a single career stage; they are all full professors. Other faculty working in the same contexts, especially women, minorities, not-yet-tenured, and part-

time faculty, would be likely to perceive those contexts differently, and their work activities would be influenced differently from the faculty whose work I observed.

In the next two sections, I present the results of my analysis of congruence of faculty work with the missions of Metropolitan State and Vantage Universities.

METROPOLITAN STATE UNIVERSITY MISSION & FACULTY WORK

The university mission statement was printed in the annual bulletin describing courses and degrees offered at Metropolitan State University. The core statement spoke of creating and maintaining an “environment for learning that promotes respect for and appreciation of scholarship, freedom, human diversity, and the cultural mosaic” of the geographic region. In this statement, then, “learning” was the highlighted as the goal, and specific modes of desirable learning were outlined.

The mission statement was followed by a list of seven specific goals. Three goals addressed attracting, retaining, and graduating or supporting people. Two goals addressed issues of teaching. One goal emphasized academic freedom, and one stressed service to the community. The term “research” was never used, either in the mission or the goal statements. The concept of research in support of the education mission, however, was addressed in the goal for faculty to engage in “teaching [which] demonstrates an active engagement with individual fields of study.” Finally, diversity was a theme throughout; the mission statement and five of the seven goals included the words “diverse,” “diversity” or “differing.”

In summary, the Metropolitan State mission statement was clearly and publicly articulated. The mission and goals statements emphasized learning, research in support of education, acceptance and inclusion of difference, and service to the region. In addition to the statement of university mission , the catalog description of each School and department at Metropolitan State included an individual statement of mission.

Metropolitan State Physics

What the Bulletin and Administrators Said about Mission and Faculty Work

The mission statement in Bulletin for School of Science read:

The school provides all of its students with a current, relevant, hands-on education in science. Close interaction between student and faculty in the laboratory and field environments fosters the development in the student of the critical skills required in science.

"Hands-on education" was a theme echoed often in the words of the Dean of Science and the chair of the physics department. The Dean of Science told me that he saw his primary role as trying "to develop faculty research which is accessible to students, not just from some esoteric research rationale, but as an absolutely essential part of the pedagogical mission of the institution." He wanted students to learn that science was about searching for possible answers, not coming up with a predetermined correct answer. To support "research as pedagogical mission," the dean felt it imperative to provide a supportive environment for faculty to pursue external funding for research. He managed his budget to provide incentives such as travel money and reduced teaching loads for those faculty who were active researchers and successful at bringing in grant money. One of his goals was to involve Metro State in regional science, technology, and industry. The Dean of Science talked about the diverse student population of Metro State only in relation to ties with industry and with potential funders. Industry leaders had told him that they were eager to hire minority and women Metropolitan State graduates. He had noticed that funders were pleased to award grants to educational programs that encouraged minority participation.

Similar to the science dean, a "hands-on" approach to learning was also the focus of the Physics chair's discussion about teaching in his department. He told me:

We believe in research--not as something antagonistic to teaching, but as not only the best way to teach, perhaps the only way to teach. Because as I said before, the world is just not reflective anymore of a bunch of courses. They want to see what's going on. And so what's the best way of teaching somebody this discipline? We think it's to involve them in hands-on activity, which is one way of saying a project, which is another way of saying research.

Since opportunities for students to get actively involved in research were limited by faculty and facilities resources, the chair told me that he attempted to get students involved in other research activities in region. The physics chair felt that the central administration at Metropolitan State was not supportive of research as it should be done in the sciences. On the

other hand, the chair also believed he had the latitude to support faculty research with little interference. He told me that he received "no static" for reducing course loads for active researchers in the department. The physics chair spontaneously brought up diversity during our conversation. He told me that he was quite proud of the relatively high percentage of women faculty and students in his department compared to physics departments in research universities.

Coherence/Contradiction of Metro State Mission with Physics Department Context

Two university policies were consistent with the learning aspect of Metro State's mission. The university's broad definition of research depicted in the goal statements was supported by the faculty handbook; fourteen professional development activities were listed that counted as research for promotion and salary review. One of the fourteen activities was textbook writing. I observed that much of Gary Byrne's time was consumed by writing an introductory physic textbook. University policy required faculty to hold at least one office hour per week for every course they were teaching. In practice, the Metro State physics faculty I observed were dedicated to facilitating the learning of the students in their classes, and office hour discussions often ran longer than the appointed time.

However, other policies in the Metropolitan physics department reduced some professors' attention to student learning: First, course releases or buy-outs allowed active researchers to reduce the time they spent in the classroom, and hence office hours, preparation, and grading. However, there was neither compensation nor recognition for activities that met the broad university definition of research in support of teaching, such as Gary's textbook writing. Second, a policy designed to encourage active faculty involvement with teaching was ignored. Despite a department policy that said they should, faculty did not rotate course assignments every three years. In particular, faculty with active research programs taught the same courses repeatedly. Finally, most faculty worked on campus only half the week. Since faculty taught two to four courses on days when they were on campus, they were often assigned to teach back-to-back classes. This reduced the time available for informal teaching before and after class.

The Dean's and chair's "hands-on philosophy" that students should learn science by doing it along side faculty mentors at first glance appeared to be consistent with the university mission statement's emphasis on learning. However, in practice, only physics majors and masters students were actually able to engage in hands-on learning. The primary teaching responsibility of department was not to the very small number of majors, but to the large number of students enrolled in service courses for engineering, computer science, and life science majors. These classes were taught in medium- to large-size lectures that had little opportunity for hands-on learning. Furthermore, resources available to faculty for teaching were not conducive to facilitating student learning. The teaching lab equipment was neither adequate and nor maintained.

Despite inconsistent messages and inadequate resources, values expressed by members of the Metro State physics department were congruent with the mission emphasis on learning. Whether the chair talked about student research projects, or faculty talked about their work in the classroom and providing extra help outside the classroom, they talked about student learning. All three faculty I observed, Hank Powell, Gary Byrne, and Ryan Newmann, told me about the ways that Metro State provided disadvantaged students with opportunities to succeed. Gary said, "One of the things that is a definite feature of what we do is acting as a place where students of odd backgrounds can arrive and thrive and have a chance to make something of themselves."

While a few undergraduates and many masters students were involved in faculty research, norms for where Metro State physics faculty did their research and when faculty were on campus interfered with the learning process for students. All but two of the active research faculty did most of their research work at other locations than Metro State. Therefore students with limited personal resources had little access to participation in faculty members' research. In addition, staggered on-campus faculty work schedules (Monday-Wednesday-Friday or Tuesday-Thursday) limited student access to faculty.

Extent to Which Metro State Physics Faculty Work Was Congruent with Dean's Sense of Mission

I asked the Metropolitan State Dean of Science to draw a diagram that depicted how he thought faculty should allocate time to work purposes to fulfill Metro State's mission. He suggested three equal circles for teaching, research and service, all overlapping at least half the time. He did not distinguish between graduate education and undergraduate education. (See Appendix A-1 for a reproduction of the dean's drawing.) He told me, "I think it's good when you can't separate out what you are doing, when you're doing something, whether this is research or teaching or service."

I compared the dean's words and his diagram with Hank's, Gary's, and Ryan's allocation of time to purposes and actions recorded for this study. The comparison is found in Table 2. Time allocation for each individual totals more than 100 percent because of integration of work purposes.

TABLE 2
Comparison of Metro State Science Dean's Preferences for Faculty Time Allocation and Integration with Actual Time Allocation by Metro State Physics Faculty (percent of total time)

	<i>Dean</i>	<i>Hank</i>	<i>Gary</i>	<i>Ryan</i>
<i>Allocation of Time to:</i>				
<i>Undergraduate Education</i>	--	56.0	70.5	21.1
<i>Graduate Education</i>	--	37.1	20.2	18.3
All Education	54.5	63.3	80.8	32.6
Research	54.5	35.7	44.9	62.3
Administration & Service	54.5	6.5	6.2	14.3
<i>Integration of:</i>				
<i>Undergrad Ed & Research</i>	--	8.4	34.0	0
<i>Graduate Ed & Research</i>	--	7.8	0.1	8.0
All Education & Research	25.0	11.3	34.0	8.0
Research & Service/Administration	25.0	0.3	0.9	8.9
All Education & Service/Admin.	25.0	4.1	2.1	1.5

There was wide variation in Metro physicists' allocation of time and integration of purposes of work. Neither Hank's nor Gary's nor Ryan's work activity patterns were congruent with Dean's balanced and integrated picture of faculty work. All three professors' allocation of time to administration and service combined was much lower (Hank, 6.5% ; Gary, 6.2%, and Ryan, 14.3%) than the approximately 54.5% suggested by the Dean's diagram. The Dean of Science also thought faculty should allocate equal proportions of time to education (undergraduate and graduate combined) and research. Instead, Hank and Gary allocated almost twice as much time to education as they did to research, and Ryan allocated almost twice as much time to research as he did to education. The Science Dean's drawing suggested that faculty should integrate education and research about one-fourth of their total time. Because of his efforts to complete the textbook, Gary actually integrated education and research 34.0 percent of his total time while I observed his work. In contrast, Hank and Ryan integrated education and research only 11.3 percent and 8.0 percent of their time.

How MSU Physics Faculty Made Sense of Their Work in Relation to the Mission

Three major themes emerged from my analysis of Metro State physics faculty perceptions of the university mission and its coherence with policies in their department and the university. First, felt there was no clear sense of mission at Metropolitan State. Even when I asked directly about mission, none of the faculty mentioned the mission statement in the bulletin. Instead, Metro State physics professors told me that there was little sense of direction at the university, or that the central administration was ineffective. Second, many of the physics faculty felt that the central administration, the Dean, and the chair emphasized funded research. Moreover, the faculty felt that the administrators expected same level of research output from faculty at Metro State as might be expected of faculty at a research university. This perception was corroborated by a comment by the Dean: "You can do real high quality research, world class research, at an institution like this. You have to chose your shots. You know, you choose something that doesn't cost a whole hell of a lot, but is still very valuable." Finally, in response to perceived administrative pressure to produce research, faculty told me that they felt it was difficult, if not impossible, to conduct leading research with Metropolitan State's heavy course load.

When the three faculty whose work I observed in the Metropolitan State physics department considered congruence between their own goals and those of the university, they all expressed feelings of pressure and frustration. Hank, Gary and Ryan worked more hours per day trying to meet multiple goals than any other professors whose work I observed. Gary felt that his own goals matched reasonably well with Metro State's teaching goals, but he still spoke wistfully of doing "real" research. Hank perceived that the messages given by the university were contradictory.

The university operationally seems to think that research is our number one priority. On the other hand, we certainly have to spend more of our time teaching than doing research. But they just assume that you do the teaching acceptably and get it out of the way. I would say they don't care very much how you do it, and then they want you to get on with your research.

Hank's perception of the university's goals was contrary to Metro State's mission of promoting student learning. Ryan felt that Metro State administrators unreasonably expected their faculty to maintain a heavy teaching load while conducting research at the same level as faculty at top research universities. Although he was concerned about the quality of teaching in physics, Ryan felt he had to make a choice about where to devote his efforts, and he had chosen research.

I remember all though school having flashes of inspiration about how I could be a teacher. . . I could be inspired and give the students a sense of how exciting life is, not to mention science specifically. . . . And I didn't want to be as bad as some of the bad teachers I'd had. But actually, I think the truth is, personality aside, I'm not doing things that differently from what my physics teachers did. I'm slipping discernibly toward their attitude about teaching.

Gary, Hank, and Ryan believed that administrators had a vision of Metropolitan State as a teaching and research university that was impossible for professors to implement, given limited time.

In summary, the Metro State mission was clearly and publicly stated, but faculty took no notice of it. The student population served by the department reflected the diversity advocated in the mission statement. The Dean talked about research as part of teaching mission, but School and department policies actually rewarded research by relieving professors

of teaching duties. Resources in the department did not adequately support the learning mission, but faculty values did. Given the large service teaching responsibility of department, some faculty taught more courses to compensate for the reduced teaching load of active researchers. This discrepancy contributed to some values tensions about best approaches to facilitating learning in the department.

The central administration at Metropolitan State advocated a research emphasis for the university, according to accounts by faculty in both the physics and English departments. This direction was supported by policies such as increased emphasis on traditional research for tenure decisions and course releases for faculty doing research.

The apprenticeship model of integrating research and education envisioned by the Dean of Science and the Physics chair was consistent with the apparent research direction of the current administration. However, this research emphasis contradicted the publicly stated mission. The work patterns of Gary, who had worked in the department for more than 20 years, were more congruent with the stated mission. In contrast, Hank and Ryan had worked in the department less than 20 years and their work patterns were more congruent with the research emphasis of the Dean and the chair.

Metropolitan State English

What MSU Administrators Said about Mission and Faculty Work

The Dean of Humanities told me that the “primary mission, the very heart of [Metropolitan State University] is teaching.” She also said that there was some difference of opinions among the deans about whom Metropolitan State should be teaching. She thought that some of the deans would have liked to see Metro State as more of a graduate institution and therefore would have liked to see less focus on providing remediation for students not yet capable of college-level work. The Dean of Humanities, however, saw serving disadvantaged students as the most important part of Metropolitan State’s mission. Her view was consistent with the Metro State mission statement’s emphasis on diversity. So was her belief about a broad definition of research in support of teaching. The Dean of Humanities saw “no distinction between research and teaching. No split.” As far as she was concerned, good teaching was involved in the broad definition of research. Furthermore, research included

not just publication in refereed journals, but all kinds of creative work, including work that remained unpublished.

She did not believe, however, that the central administration always operated in accordance with the mission. While community service was listed as important in the faculty manual, she felt it was not honored by the administration. She explained to me that the faculty manual, made it clear that faculty must attain a threshold level of teaching excellence for tenure and promotion. According to the manual, after teaching, professional development and campus and community service had equal worth. The Humanities Dean told me that she was committed to the manual and the faculty union contract. She thought her expectations were clear to faculty the School of Humanities, but she felt that faculty received messages that were inconsistent with the mission from the central administration.

The chair of the English department agreed that School of Humanities and the central administration held different perceptions of university mission, and he said that this was a "serious schizophrenic problem that's been around for quite some time" He dated the onset of institutional schizophrenia to former president whose "idea was that you could have it both ways. You could have a teaching faculty that also did research." This became more and more evident as the central administration paid more attention to professional development (meaning research) than to teaching. He felt that increasing problems resulted from administrators who expected faculty to conduct research, even though they provided no resources for research and did not reduce demands on faculty to teach.

The chair also talked about how the English department's work with diverse students was consistent with the mission statement. Since the university was admitting more and more students unprepared for college level work, the department was "taking socially responsible route" and offering remedial courses.

Coherence/Contradiction of MSU Mission with English Department Context

Metropolitan State's commitment to student diversity was evident in its admissions policies. Not only did students come from diverse ethnic and linguistic backgrounds, but there was also extreme variation in students' preparedness to undertake college level work. The English department contributed to Metro State's mission by offering remedial writing for

native speakers and writing courses for students whose first language was not English. The dean required that tenured and tenure-track faculty teach one basic writing course per term. Policies that were consistent with the university's learning mission included a heavy teaching load and long office hours. When reviewing faculty for promotion, the Dean followed the broad definition of faculty research in support of teaching suggested in the published mission statement.

On the other hand, some recent university policies seemed to contradict the mission. One was the central administration's decision to reduce the teaching load for junior faculty to encourage them to do research. This created some tension between junior and senior faculty in the English department. The university also provided a resource that promoted research at the expense of teaching: competitive grants to support faculty research. A faculty member who won a grant received a reduced teaching load. Another recent policy change reduced emphasis on teaching and learning: faculty no longer received credit for thesis advising or supervising independent study. Two faculty that I observed, Aaron Chase and Darryl Allen, spent much time on informal teaching. However, both professors were considering spending less time because there was no longer any compensation.

The values of the faculty in the Metropolitan State English department were consistent with the mission statement emphasis on learning. Professors talked to me spontaneously about students and student learning. A department colleague of the faculty I observed compared Metro State to the university where she used to work:

State, more than where I used to teach, really does have this ethic of caring about students and caring about teaching. . . . I hear less sort of student bashing than I have elsewhere. . . People brag about their students.

The goal of scholarship in support of teaching was supported by the norms for course design in the Metro State English department. Every professor I talked with in the department talked of designing courses that related their work in the classroom to their research. They felt that the teaching enriched their research and the research enlivened their teaching. As a result, faculty were constantly renewing course material rather than repeating the same information term after term. This norm of integrating research and teaching was supported by

department policies that allowed faculty the freedom to design their own courses. However, one norm contradicted the mission: faculty worked off campus half the week, and therefore limited the time they were accessible to students.

Extent to Which Faculty Work Was Congruent with Dean's Sense of Mission

When I asked the Dean of Humanities to specify how much time she wanted faculty to spend on purposes of work in the School of Humanities, she refused. She emphasized that she had "a different configuration for every person" and she honored each faculty member as an individual. She told me that all faculty in the School of Humanities combined graduate and undergraduate teaching. She had never seen a person whose "faculty profile was a blank in the area of research" when she evaluated their research by her own and Metro State's broad definition. She was happy that some faculty in the School were more active in service than teaching or research because she felt they were helping students make connections to the community. If a faculty member made public service their area of significant contribution, and as a result, they were "just touching base" with their research, the Dean of Humanities told me she would see that person as "first rate."

Further, the Dean explained to me that the Metro State faculty manual made it clear that faculty must attain a threshold level of teaching excellence for tenure and promotion. After teaching, professional development and campus and community service had equal worth. I used this statement to assess the work of faculty in department in relation to Dean's perception of mission. All three faculty I observed devoted a great deal of time to teaching as shown in Table 3. (Time allocation for each individual totals more than 100 percent because of integration of work purposes.) In practice, Aaron, Darryl, and Mike spent more than twice as much time on education as on research or service. Some aspects of their teaching were also consistent with the Metro State goal of involving students and faculty in the community. Aaron and Darryl encouraged student involvement in regional culture. Mike Easton taught English to immigrants to the region, he taught teachers of immigrants, and conducted research on second language learning. He thus addressed regional needs with both his teaching and his research.

TABLE 3
*Comparison of Metro State Humanities Dean's Preferences for
 Faculty Time Allocation and Integration with Actual Time Allocation
 by Metro State English Faculty
 (percent of total time)*

	<i>Dean</i>	<i>Aaron</i>	<i>Darryl</i>	<i>Mike</i>
<i>Allocation of Time to:</i>				
<i>Undergraduate Education</i>	<i>n/a</i>	<i>50.4</i>	<i>45.3</i>	<i>24.3</i>
<i>Graduate Education</i>	<i>n/a</i>	<i>57.0</i>	<i>53.3</i>	<i>52.0</i>
All Education	n/a	76.0	80.1	61.5
Research	n/a	32.1	37.0	28.1
Administration & Service	n/a	31.8	3.1	33.3
<i>Integration of:</i>				
<i>Undergrad Ed & Research</i>	<i>n/a</i>	<i>15.9</i>	<i>12.0</i>	<i>1.7</i>
<i>Graduate Ed & Research</i>	<i>n/a</i>	<i>14.1</i>	<i>17.1</i>	<i>15.7</i>
All Education & Research	n/a	18.3	24.3	15.7
Research & Service/Administration	n/a	10.1	0.1	9.0
All Education & Service/Admin.	n/a	15.4	1.7	6.3

The Metro State English faculty I observed spent about one-third of their time on research. In contrast to administrators in the physics department, the English chair and the Humanities Dean supported widely different activities as research. Mike's applied linguistics work resembled social science research. He worked with graduate students on quasi-experimental investigations into problems of learning English. Darryl wrote fiction. Aaron wrote fiction and literary criticism. Congruent with the Humanities Dean's focus on service, Mike performed a great deal of local, national and international service. He considered this work as teaching "beyond the walls of the university."

In the Metropolitan State English department, faculty values and perceptions of their behavior were remarkably congruent with the publicly stated mission, even though none of them mentioned the statement. The Dean of Humanities was very aware of the mission statement, however, and endeavored to create an atmosphere in the School that was consistent with the mission, the faculty handbook, and the union contract. Furthermore, since the Dean valued many different ways to balance faculty responsibilities, there was little chance that the

work patterns of the faculty could be incongruent with her perception of how faculty should fulfill the mission.

How Faculty Made Sense of Their Work in Relation to Mission

Three major themes emerged from my analysis of Metro State English professors' perceptions of the university mission and its coherence with policies in their department and the university. These themes were very similar to those voiced by their colleagues in the physics department. First, the faculty paid little attention to Metro State's published mission statement. When I asked about the university's mission, none of the faculty I spoke with mentioned statement in the university bulletin. Second, some English faculty thought the central administration did have a vision, but the vision was not about improving learning. Instead these faculty believed the administration emphasized "conventional research," meaning publication and grants. These faculty also believed that the School of Humanities and the English department emphasized a combination of research and teaching. Finally, several English faculty felt that some administrative policies inhibited student learning by restricting faculty and student choice. These faculty felt that the heavy teaching load, the large classes advocated in the name of efficiency by the administration, budget cuts and fee increases hurt students and interfered with faculty ability to fulfill the learning mission at Metro State. These themes suggest an inconsistent work environment similar to the environment that provoked frustration in the Metro State physics faculty whose work I observed.

The Metro State English professors I observed did not voice a similar level of frustration, however. Aaron, Darryl, and Mike believed that there was congruence between their own goals and those of the university. In fact, when I asked Aaron how well his goals matched the university's goals, he spoke for the first time in terms of mission. He told me that Metro State's goals were close to his own, and included providing a meaningful education for students from diverse cultural backgrounds, conveying ways to make life more productive, and using students' diverse experiences to create richer in-class experiences. Unlike Aaron, Darryl did not speak of mission: instead he was appreciative of the freedom he had at Metro State to teach the way he felt most appropriate. He said, "The reason I came to State was that I know it would give me . . . the freedom to teach many different kinds of things in the way I

wanted to with relatively little pressure from outside. Furthermore, Darryl appreciated that his fiction writing fit within the mission as defined by the Humanities Dean and the English chair, whether he wrote an award-winning short story or experimental pieces published in small literary journals. Like Aaron and Darryl, Mike discussed teaching when considering the match between his own and Metropolitan State's goals. Mike, however, was more comfortable with their heavy teaching load.

Obviously I'm in the right place because, as you know, key part of the job description at Metropolitan State is "Thou shalt teach four courses every term." And so, I do and I enjoy it, and I like that. So there the goals are congruent.

In summary, the Humanities Dean's sense of mission was aligned with the published Metropolitan State University mission. During interviews, most faculty conveyed that they had little sense of the written mission, even though it was printed in Bulletin. Faculty also expressed deep mistrust of the central administration's goals. Yet when faculty spoke of their own work and goals, they were congruent with the published mission. In other words, despite a communication gulf between the central administration and faculty, there was congruence between faculty work and stated university goals. The Dean's actions and policies had stronger impact on senior faculty than the central administration's attempts to change mission by policies. However, interviews with recently tenured associate professors indicated they did not share this sense of congruence. These younger faculty knew they had required central administrative blessing for tenure and they would need it to be promoted again. They must attend, therefore, to the central administration's policies as well as to the Dean's policies.

VANTAGE UNIVERSITY MISSION & FACULTY WORK

There was little printed or public information about Vantage University's mission. However, an implicit sense of mission as excellent research and excellent teaching--with more emphasis on research--was consistent across available written materials, interviews with administrators and faculty about mission, and evidence from interviews about formal and informal elements of the university context. Also consistent was the perception that the way to achieve excellence was to recruit and retain high quality faculty and students.

The only place the Vantage University mission statement was printed was the Sponsored Projects Manual for faculty to use when preparing grant proposals. The Courses & Degrees Bulletin and admissions literature described Vantage characteristics and history, but not its mission. The president of Vantage spoke of attending to mission during a one-hour State of the University Address he presented during one of my field visits to Vantage University. In the middle of his address, the president said,

One of my highest priorities since coming here a year and a half ago has been to engage my faculty colleagues, our students, the staff, the trustees, and the university's alumni in a review of our institutional priorities--particularly our curriculum and policies related to research and teaching. I wanted our focus to be an internal one. What kind of institution are we? What should we be? What should we do? How should be do it? . . . However, all too often my attention has been drawn from internal considerations and diverted to issues involving government.

His speech contained no further references to mission or institutional priorities. One recent issue of alumni magazine included a statement by the president about the university's goals. He said that goals are best expressed as attributes, and the attributes that best describe Vantage are "excellent, rigorous, creative and open." The president's statement attributed Vantage University's excellence in teaching and research to its greatest resources, faculty and students, and emphasized the importance of attracting and retaining the very best.

The Senior Dean was responsible for both physics and English in the College of Science and Humanities at Vantage.¹ The Senior Dean saw his major responsibility as "allocating resources, which largely means faculty positions across the various intellectual disciplines." He hoped that his work on appointments, promotions and salary setting influenced faculty "productivity and contribution." He defined productivity as "teaching and research, contribution to the university." From his experience as a social science faculty member, the dean perceived a large overlap between research and graduate education; he thought there was little distinction between the two. The Dean believed that undergraduate

¹ I will explore views of Associate Dean for Science and the Associate Dean for Humanities in the sections where I describe congruence of mission in the Vantage physics and English departments.

education intersected with both research and graduate education, but not very much. He told me that "sometimes you can relate a lecture to your research, or occasionally involve an undergraduate in the faculty member's research activity."

Vantage Physics

What VU Administrators Said about Mission and Faculty Work

Like the Senior Dean, the Associate Dean of Sciences saw his primary responsibility in fulfilling the mission of Vantage University as maintaining "faculty through the appointments and promotions process and salary-setting process." When talking about how faculty fulfilled the purposes of Vantage University, the Associate Dean of Science emphasized overlap between teaching and research. As he elaborated, it was clear that the "teaching" he was talking about was not classroom-oriented teaching, but research training for graduate students. He saw undergraduate teaching as a different activity altogether. He told me, "Certainly there is a certain amount of undergraduate teaching that is out here on the margin, which maybe towards the upper division levels merges into research, but at the beginning levels doesn't have much to do with research."

The physics department chair wished that the implicit Vantage mission emphasized teaching more. He told me, "it's important that the primary mission at this university be education." However, he felt that his ideal mission was different from the sense of mission held by most faculty at Vantage. The physics chair believed that most of his colleagues would argue that "to be a great research university you have to have research here for its own sake."

When I was conducting this study, the Vantage physics department produced a 16-page brochure to distribute to prospective graduate students. The allocation of space to discussion of teaching and research in the brochure was another indicator of their relative importance in the Vantage physics department. Most of the brochure focused on research; very little space was devoted to teaching. For example, embedded in three pages on research accomplishments of past and current faculty was one line about teaching. Eleven pages were devoted to current research interests of faculty. In contrast, one half of one page described courses and dissertation requirements for the Ph.D. The brochure communicated much more about excellent research than it did about excellent teaching.

Coherence/Contradiction of Vantage Mission with Physics Department Context

Most elements of Vantage University physicists' work contexts supported the implicit mission of excellent teaching and excellent research derived from resources of faculty and students. The physics department's selective graduate admissions process supported the mission of maintaining excellence by recruiting students already proven to be excellent. Faculty reward policies emphasized excellence in research. Professors' value in salary was determined by how much other universities were willing to pay to hire them away from Vantage. Tenure and promotion decisions about faculty excellence were also assessed by external attribution. Outside reviewers were asked to rank candidates in comparison with others who were recognized as foremost in their field.

Departmental teaching policies contributed to excellence in Vantage physics professors' classroom teaching performance. The professors I spoke with were proud of lecturing effectively. However, their other classroom-oriented teaching responsibilities were minimal. Faculty in the Vantage physics department did little or no grading. They had few office hours. Resources, including departmental technical support for teaching, reduced faculty involvement with student learning. The department paid for an entourage of helpers, including laboratory teaching assistants, graders, tutors, a class demonstration technician and an undergraduate laboratory teacher. For Vantage physics faculty, excellence in teaching was limited to performance in the classroom.

Vantage physics professors thought graduate students were essential resources. Not only did graduate students take over undergraduate informal teaching and grading responsibilities, but they also assisted with faculty research. The prevailing apprenticeship model of graduate research training in physics contributed to a common perception that excellence in graduate teaching contributed to excellence in research. Faculty and students worked together on the faculty members' research. With the graduate students' assistance, the faculty were able to accomplish larger projects and fulfill their contracts with funders. The students benefited because they learned to conduct research while working on their faculty sponsor's projects. The tasks of faculty research projects that students completed became the foundations of their dissertations. Several Vantage physics faculty believed they contributed

most to graduate students' research training when they left students alone. Then students would fail and learn to recover without faculty help.

Staff resources supported the mission of excellence in research, but faculty did not believe the university supplied these resources. Since the salaries of many of the technical staff came from professors' research grants, the professors felt they really supplied this resource themselves. Some physics faculty felt that Vantage University provided fewer resources than it gained from the physicists' entrepreneurial efforts.

Values expressed by faculty in the department were consistent with the implicit mission of excellence. Faculty felt peer pressure to excel. Several mentioned the department tradition of excellence in both teaching and research. Professors also told me that an entrepreneurial spirit motivated all the faculty in the department. Vantage physicists' values carried over into a norm of working long hours. Most of the faculty lived close to campus and tried to be easily available to their graduate students.

Extent to Which Faculty Work Was Congruent with Science Dean's Sense of Mission

The Associate Dean of Science drew a diagram of desired faculty allocation of time with the physics department specifically in mind (See Appendix A-2.). He considered teaching and research as inseparable much of the time--he estimated 40 percent. But he separated out what he called "service teaching," introductory courses for non-physics majors through first year graduate physics courses, as totally distinct from research. The Associate Dean of Science estimated classroom teaching should take about 20 percent of faculty time. He envisioned ways that administration contributed to both teaching and research, although he didn't see that overlap as "one and the same activity" the same way he saw the inseparability of much teaching and research. He grouped administration and professional service together.

I compared the ways that the Vantage physicists I observed allocated their time to the words and the diagram of the Associate Dean of Science in Table 4. (Time allocation for each individual totals more than 100 percent because of integration of work purposes.)

Table 4
Comparison of Vantage Science Dean's Preferences for
Faculty Time Allocation and Integration with
Actual Time Allocation by Vantage Physics Faculty
(percent of total time)

	<i>Dean</i>	<i>Sam</i>	<i>Paul</i>	<i>Ted</i>
<i>Allocation of Time to:</i>				
<i>Undergraduate Education</i>	20	15.8	36.9	7.3
<i>Graduate Education</i>	40	42.3	26.0	11.6
All Education	--	50.5	60.2	18.8
Research	60	65.6	50.9	63.2
Administration & Service	20	29.2	16.5	61.3
<i>Integration of:</i>				
<i>Undergrad Ed & Research</i>	0	2.5	2.4	0
<i>Graduate Ed & Research</i>	40.0	31.1	25.3	11.0
All Education & Research	--	32.8	27.7	11.0
Research & Service/Administration	5.0	14.6	3.8	37.9
All Education & Service/Admin.	5.0	6.5	0.4	1.2

The proportion of total time spent on research by the faculty I observed in Vantage physics ranged from Paul's 50.9 percent to Sam's 65.9 percent. These proportions were close to the ideal 60 percent depicted by the Science Dean. The Science Dean had also suggested that the time physicists should devote to graduate education was a large subset of the time they should devote to research. When I observed their work activities, I saw that most of Sam's, Paul's, and Ted's graduate education activities were integrated with research. However, the proportion of total time allocated to graduate education varied a great deal among the three physicists: 42.3 percent for Sam, 26.0 percent for Paul, and 11.6 percent for Ted.² As I observed faculty work in Vantage physics, undergraduate education was almost completely distinct from graduate education and research. This was similar to the Science Dean's description and diagram. The proportion of total time that Vantage physicists spent on

² Interview data suggest that Ted usually allocates a higher proportion of time than 11.6% to graduate education. On two of the five days I observed his work, Ted was preoccupied with hosting conferences.

undergraduate education ranged from 36.9 percent for Paul to 15.8 percent for Sam to 7.3 percent for Ted. Most of that time was not integrated with other purposes of work. Although there was some variation in amounts of time, Vantage physicist's patterns of work activities were similar to the pattern sketched by the Dean of Science.

How Faculty Made Sense of Their Work in Relation to Mission

Four major themes emerged from my analysis of Vantage University physics faculty perceptions of the university mission and its coherence with policies in their department and the university. First, most Vantage physics faculty with whom I spoke weren't sure whether or not an official mission statement existed for the university. However, most understood that the implicit mission was "excellent research and excellent teaching." The second theme assigned a priority to these two purposes. Vantage physics faculty perceived that research excellence was more important than teaching excellence. A statement by a colleague of the faculty I observed summarized this theme: "Research counts for more--you can tell by tenure decisions--and that's appropriate." A third theme was very similar to the Vantage president's statement about excellence as an attribute. Faculty talked frequently about the high caliber of their colleagues and the worth of their students as resources that were critically important to their own success. A fourth theme voiced by three members in the Vantage physics department was the sense that Vantage had multiple goals, and perception of mission would vary with the location in the university. On one level, these faculty recognized that excellence in the humanities or in one of the professional schools at Vantage would look different from excellence in physics. On the other hand, these faculty also felt that the excellent grant-getting ability of scientists was supporting much of the excellence elsewhere on campus.

Sam, Paul, and Ted considered their own goals to be congruent with the goals of Vantage University. Sam said, "I'm not exactly sure what the goals of Vantage are, but as far as I can tell, my goals and those of the university are the same: high quality education for students and excellent research." Paul felt the most people would agree that the primary purpose fulfilled by faculty at Vantage was research. "Permeating throughout the institution there is the view that Vantage is a research institution." The only conflict Paul felt with university goals was concern about the amount of time committee work took away from his

other responsibilities. Ted also felt his personal goals were congruent with Vantage University goals. Vantage made it easier for Ted to teach more effectively by "having a restricted teaching load. . . If you can teach just one course, then your level of involvement can be dramatically high." Vantage contributed to Ted's research with its "collection of other faculty members that are around, an outstanding group of graduate students," and "an encouragement of people building their own little empires."

In summary, although the Vantage University mission was neither clearly nor publicly stated, the deans' chair's and professors' perceptions of the mission were consistent. For the most part, professors felt that their values and the values of the university were congruent. The Dean of Science's depiction of how he would like to see physics faculty allocate their time to purposes of work was similar to the ways faculty observed for this study actually allocated their time. Policies, resources, values and norms in the department were consistent with promoting excellence, especially in research. Policies rewarded faculty who excelled at research. Excellence was determined by comparing Vantage physicist's work to the work of the best physicists in the world. Resources made it easy for faculty to focus on excelling in classroom performance, and relieved them of responsibility for ensuring that undergraduate students learned. In addition, the physics mode of research training, apprenticeship, contributed to congruence of faculty work with Vantage University's implicit mission.

Vantage English

What Vantage Administrators Said about Mission and Faculty Work

When I asked the Dean for Humanities to summarize Vantage University's mission in a few sentences, he responded with three words, "Teaching and research." Like the Senior Dean and Dean of Science, the Dean of Humanities believed "The single most important job of the dean's office is appointments and promotions." He told me that the university particularly wanted faculty to be renowned for their research, whatever the research might be. Although the Humanities Dean said the mission was both teaching and research, he directed talked most about research and policies that facilitate research during our conversation. He told me that "the main thing that we're concerned about is simply productive faculty members doing high quality research."

The Vantage English chair said of the university mission: "It's talked about always in very general terms by everybody, administration and the faculty, insofar as they discuss it. And they feel that the mission is to do excellent research and publication, to do excellent teaching of graduates and undergraduates, and to be good departmental and university citizens." The chair told me that, in his experience "research has been rated more highly than teaching, and teaching more highly than citizenship."

Coherence/Contradiction of Vantage Mission with English Department Context

As with physics, selective graduate admissions processes in the Vantage English department contributed to excellence in the graduate student population. Faculty reward policies emphasized excellence in research. Professors told me that some faculty in the department had sought outside offers which validated their worth as researchers as a way to gain significant salary increases. As in physics, tenure and promotion decisions about faculty excellence were assessed by comparing candidates to a nation-wide pool of academics who were recognized as the best in their fields.

Department teaching load policies concentrated faculty teaching efforts so that faculty could have prolonged time to focus on research. Vantage English faculty taught two courses per term then had a term free of classroom teaching. The Dean of Humanities was delighted that this policy promoted faculty research. He told me, "Now that particular feature of the English department, the way they allocate their courses, I think probably has the effect of emphasizing the importance of research with the faculty. I hope it does." Another department teaching policy ostensibly rewarded informal teaching, but had the effect of protecting faculty research time. This policy was an elaborate point system worked out by the members of the English department to recognize time spent supervising senior honors theses or Ph.D. dissertations. The reward for doing such informal teaching was release time from formal classroom teaching.

University and department resources promoted English faculty research. The university provided small library offices where English faculty could retreat for quiet, uninterrupted research time. In these offices, professors were near the texts that served as the primary sources for their research and far from their office phones.

Graduate student teaching assistants were another resource that saved faculty time for research. Graduate teaching assistants did the grading, conducted discussion sections, and provided informal teaching help in many upper division classes for English majors as well as lower division general education courses. Thus, although the Vantage English department took pride in the many awards its faculty won for teaching excellence, faculty were actually involved in few teaching activities where they were responsible for student learning.

Values and norms in the department contributed to the vision of excellence. Faculty felt intense peer pressure to excel at both teaching and research. The norm was to work long and hard to push publications out the door. Working long and hard, however, looked very different in the English department than it did in the Vantage physics department. The apprenticeship model of graduate student training touted as ideal by all Vantage Deans I spoke with did not fit the English mode of research training. English department faculty and graduate students did their research separately and alone, either in the library or at home. The chair told me that collaboration was rare in English.

Extent to Which Faculty Work Was Congruent with Dean's Sense of Mission

The Humanities Dean's description of how faculty should appropriately allocate their work time at Vantage resembled accounts by the Senior Dean and the Science Dean. The Humanities Dean believed that undergraduate education could "be separated out as a separate mission." On the other hand, he thought graduate education was inseparable from research. He told me:

The most valuable part of graduate education is the apprenticeship into research that goes on in particularly the science departments, but not just the science departments. This is also true in the humanities and certainly in the social sciences. . . . By definition, what you are learning to do is conduct research, and push the boundaries of knowledge. So that shows why the research and graduate education are inseparable in some ways.

In Table 5, I compare the dean's words and his diagram with Rich's, Jim's, and Blake's allocation of time to purposes and actions recorded for this study. (Time allocation for each individual totals more than 100 percent because of integration of work purposes.) The Humanities Dean's sketch of how he felt faculty should allocate time to purposes of work is

Table 5
Comparison of Vantage Humanities Dean's Preferences for
Faculty Time Allocation and Integration with
Actual Time Allocation by Vantage English Faculty
(percent of total time)

	<i>Dean</i>	<i>Rich</i>	<i>Jim</i>	<i>Blake</i>
<i>Allocation of Time to:</i>				
<i>Undergraduate Education</i>	40.0	58.9	32.2	52.9
<i>Graduate Education</i>	25.0	29.4	26.5	37.0
All Education	60.0	86.9	49.8	61.5
Research	40.0	22.5	38.7	36.5
Administration	5.0	16.5	11.6	10.6
Service	5.0	6.7	4.2	6.2
<i>Integration of:</i>				
<i>Undergrad Ed & Research</i>	10.0	17.6	8.3	14.3
<i>Graduate Ed & Research</i>	25.0	0.0	3.7	14.5
All Education & Research	30.0	17.6	8.3	14.5
Research & Service	5.0	0.0	2.7	2.4
Undergrad Education & Admin.	5.0	0.0	2.3	4.0

found in Appendix A-3. The most dramatic difference between the Dean's expectations of faculty work and actual faculty work in the Vantage English department occurred in the area of overlap between research and graduate education. What overlap occurred, happened as faculty were preparing for or conducting classes in which they incorporated ideas from current research projects. In all cases, these classes also enrolled undergraduate students. When a faculty member provided research training to a student, the professor was facilitating the student's work. Usually, the subject of the student's work was either related to the professor's past research, or it was only tangentially related to his current research efforts. When English faculty--and students--did research, they went off among the books by themselves. One Vantage English department member told me he couldn't imagine what he would have a research assistant do for him.

Most of the integration of research and teaching that I observed in the Vantage English department occurred as faculty prepared for classes using sources that were relevant to their

current research projects. As Jim described it, "Everything that I write about I do teach, and everything I teach, I try to sometimes write about." However, Vantage English told me that they did much of their research and most of their writing during off-duty terms and summers when they had no classroom and few informal teaching responsibilities.

How Faculty Made Sense of Their Work in Relation to Mission

Four major themes emerged from my analysis of Vantage University English professors' perceptions of the university mission and its coherence with policies in their department and the university. These themes were very similar to those voiced by their colleagues in the physics department. First, many faculty said that they were not aware of an official mission. On the other hand, the second theme suggests that faculty were very much aware of the same implicit mission as were Vantage physicists. Several faculty had a sense that Vantage University wanted excellence in both research and teaching, and as Rich Jeffers suggested, a "symbiosis between the two." Third, English faculty felt that the implicit Vantage mission placed more importance on research than teaching. One faculty member said, "research really tends to drive the whole institution more than teaching does," and another told me, "Vantage tries to do both teaching and research but is really a technical university." Finally a few English professors, like a few of the Vantage physicists, said that the mission was perceived differently by different factions within the university.

The three Vantage English professors whose work I observed felt that their goals were similar to those of the university. Rich felt that Vantage had facilitated his growth as a scholar. Rich felt that Vantage demanded much time in citizenship activities, but that even though "that's bound to slow you down," he thought faculty involvement in university governance was "a good thing." All the Vantage faculty I observed dedicated much time to department or university administration. Perhaps because of his intense involvement in university governance, Jim said, "I've never felt that the university is 'them.'" Blake felt that there were ways that his goals were congruent with Vantage goals. "They match in that there is a commitment to academic excellence, to research and learning--more concretely, to an understanding of our civilization and how it got here, a respect for writing in areas--you know, a real respect for learning." Blake was one of few faculty at Vantage who mentioned learning.

In summary, although the Vantage University mission was neither clearly nor publicly stated, the deans', English chair's and English professors' perceptions of the mission were consistent. For the most part, English faculty felt that their values and the values of the university were congruent. However, the ways that Rich, Jim and Blake actually spent their time differed from the ways that the Associate Dean of Humanities said that faculty should allocate time to fulfill the Vantage University mission. The major difference between the Associate Dean for Humanities' descriptions of appropriate time allocation and actual time allocation was the extent to which the faculty integrated graduate education and research. The Associate Dean for Humanities was applying an apprenticeship model of graduate education that did not fit the actual work of English professors. No matter how much English faculty excelled at both teaching and research, their work would not be congruent with the implicit vision an apprenticeship model for research training. According to the apprenticeship model as it worked in physics, students learned to do research as they worked along side faculty on portions of their faculty sponsors' projects. Time that a physics faculty spent informally teaching graduate students usually contributed to the faculty member's research. However, in the English department, students learned to conduct research from occasional consultations with professors about the students' work. The time that English faculty spent informally teaching graduate students usually took time taken away from the faculty member's research. However, none of the English faculty I spoke with mentioned this discrepancy.

DISCUSSION

The evidence from each department shows that the work patterns of faculty I observed in the Metropolitan State English department and the Vantage University physics department were reasonably congruent with the sense of mission communicated by their deans. Moreover, the work patterns of the three Metro State English professors were also congruent with the university's printed and public mission statement even though no faculty I talked with mentioned it. The work of Vantage physicists I observed was congruent with the implicit sense of mission held by deans, chairs and faculty at Vantage. Furthermore, policies, resources, norms and values in the two departments were, for the most part, consistent with their respective missions.

In contrast, the work patterns of faculty I observed in the Metropolitan State physics and the Vantage English departments seemed incongruent with the missions of their universities. The reasons for incongruence in the two departments, however, were different. Metropolitan State physicists worked in an organizational context with inconsistent elements. The Dean's and chair's sense of mission may have been consistent with the direction of the current administration, but the reward policies and resources provided at university, school, and department levels contradicted the publicly-stated mission. Moreover, the emphasis on faculty and student research conflicted with the service teaching responsibilities of faculty. This pattern, then, suggests that inconsistent organizational contexts contributed to incongruence between faculty work and university mission. However, when contrasted with congruence of work in the Metro State English department, incongruence in the physics department presented a puzzle. The two departments, after all, were located within the same university. The critical difference between the two departments appeared to be the differing management styles of the two deans. At Metropolitan State, the deans had a great deal of autonomy to administer their schools according to their personal styles. During my conversations with the Metro State deans, each spontaneously mentioned the other as an example of a dean with a dramatically different managerial style. The deans' policies had more direct impact on the work of senior faculty than central administration policies. The Metro State Dean of Humanities required all faculty to teach introductory courses and gave no special favors to research stars. In contrast, the Metro State Dean of Science used his budgetary authority to supply privileges to faculty who were successful in securing external funding for research. Such privileges included relief from teaching. The Dean of Humanities considered a wide variety of professional development activities as research and as important contributions to the School. The Dean of Science only considered activities "research" if they led to publication in refereed journals. Such activities were better if supported by external grants. As a consequence, the faculty I observed in the English department put teaching first, but also engaged in a wide variety of research and writing activities. In contrast, the faculty I observed in the physics department felt they had to choose between putting teaching first or putting research first.

There were, however, two university policies that shaped the work of faculty in both the Metro State physics and English departments: teaching responsibilities and tenure decisions. The service classroom teaching duties of faculty in the Metro State physics and English departments consumed much of their time. With the notable exception of textbook writer Gary Byrne, faculty were less able to integrate their research with the tasks associated with teaching service courses. For physics professors, this decreased the amount of time they had to provide research training to advanced students. For English faculty the consequence of teaching basic writing was diminished opportunity to teach texts that they were using for their research.

The second university policy influenced the work and perceptions of the newly tenured colleagues of the faculty members that I observed. Tenure and promotion were ultimately decided by the vice president. My interviews with associate professors in the Metropolitan State English department revealed that younger faculty experienced more contextual inconsistency than their senior colleagues. They felt pulled in two directions. To attain tenure, they had made decisions about time allocation that were more consistent with the research direction of the administration than the mission and the vision of the dean.

Incongruence between patterns of faculty work and university mission was not attributable to contradictory elements of context in the Vantage English department. Vantage English professors' perceptions of the university's implicit mission were similar to those held by their colleagues in physics. Policies about faculty work, resources available to faculty, norms and values animating faculty work in the department were, for the most part, consistent with the implicit mission. Disciplinary factors interfered with congruence between faculty work and university mission in the Vantage English department. Two critical elements of their disciplinary context, the mode of conducting inquiry and the nature of graduate student training in the humanities, precluded English professors' ability to fit their work to the apprenticeship model pervasive at Vantage. Even though the Associate Dean of Humanities retained faculty status in a humanities department where faculty and students usually pursued research interests alone rather than in groups, he still assumed an apprenticeship model was suitable for describing the work of humanities faculty. However, English faculty counseled

and consulted with graduate students rather than training them according to an apprenticeship model. The findings are summarized in Table 6.

TABLE 6
Elements of Contexts that Influenced Congruence of Faculty Work with University Mission

<i>Contextual Influences</i>	<i>Faculty Actions</i>	<i>Sensemaking</i>	<i>Congruence</i>
<ul style="list-style-type: none"> ❖ Dean's and chair's policies consistent with mission (department) ❖ Disciplinary norms consistent with mission (discipline) 	<ul style="list-style-type: none"> ❖ Allocation of time and integration of purposes of work consistent with Dean's expectations 	<ul style="list-style-type: none"> ❖ Faculty values consistent with mission 	<ul style="list-style-type: none"> ❖ high levels
<ul style="list-style-type: none"> ❖ Dean's and chair's policies inconsistent with mission (department) ❖ Disciplinary norms inconsistent with mission (discipline) 	<ul style="list-style-type: none"> ❖ Allocation of time and integration of purposes of work inconsistent with Dean's expectations 	<ul style="list-style-type: none"> ❖ Faculty values inconsistent with mission 	<ul style="list-style-type: none"> ❖ variable or low levels

This analysis suggests that mission did not need to be publicly or clearly stated in order to influence the work of faculty. Evidence from these four departments suggests that faculty themselves paid little attention to such statements. Whether they paid little attention, as for Metro State faculty, or whether there was no explicit mission to notice, as at Vantage University, faculty members' and mid-level administrators' perceptions of the implicit mission of their university were similar. Despite different disciplinary approaches to the development of knowledge, English and physics faculty at Vantage University had similar perceptions of Vantage's implicit mission. English and physics faculty at Metro State also perceived the mission of their university in similar ways. Whether the mission was explicitly stated or

implicit, congruence of faculty work with mission occurred if other factors in faculty workplace contexts were consistent with the mission. Comparing the work and perceptions of faculty in the Metropolitan State English department with faculty work in the other three departments suggests that explicit mission may be most likely to influence faculty work indirectly if mid-level administrators shape reward, workload, and resource allocation policies in a fashion consistent with the stated mission. However, the work and perceptions of faculty in the Vantage physics department indicate that, in the absence of an explicit mission statement, policies consistent with an implicit mission also work together to influence faculty allocation of time and integration of work purposes.

In addition to consistency between contextual factors and mission, other influences on congruence of faculty work with mission emerged from this analysis. First, deans' policies had more direct impact on the work of faculty than central administration policies. Thus, to the extent that a dean's sense of mission is consistent with the stated mission of the university, other features of department context are more likely to be consistent as well, contributing to contextual coherence and hence, congruence of faculty work. Second, the implicit mission of Vantage University included a sense of research inquiry and research training more likely to be found in the sciences than in the humanities. This suggests that to the extent that a mission implicitly privileges one mode of inquiry or training as a model, the work of faculty in disciplines that practice alternative methods of inquiry or modes of training will be less congruent with the mission.

SOME FINAL THOUGHTS

When I began to design this study in 1992, higher education policy makers were lamenting faculty members' choices to put personal priorities for research ahead of institutional priorities for teaching. Since that time, laments have given way to serious discussions about how to change faculty behavior, and policies have been enacted to regulate faculty behavior. One arena for the nation-wide discussion about faculty role conflict is a new annual three-day Forum on Faculty Roles and Rewards sponsored by the American Association for Higher Education. Each year since 1992, hundreds of campus leaders have gathered at the AAHE Forum to hear presentations about how to involve faculty in realigning

their own work priorities, about how administrators can use hiring processes, tenure decisions, or group incentives as levers to change faculty behavior, and about faculty workload and productivity (AAHE, 1995).

Evidence from this study, however, indicates that there are discrepancies between some public pronouncements about what faculty should do, and what faculty are actually encouraged to do by the governance, policies, resources, norms, values, and communication patterns in their workplace contexts. The case studies presented in this paper showed that professors' allocation of time to purposes of work, and the degree to which they integrated purposes of work were constrained by many elements of their university, departmental, and disciplinary contexts. Furthermore, university missions were sometimes inconsistent with policies or other elements of work contexts, making congruence of faculty work with mission problematic.

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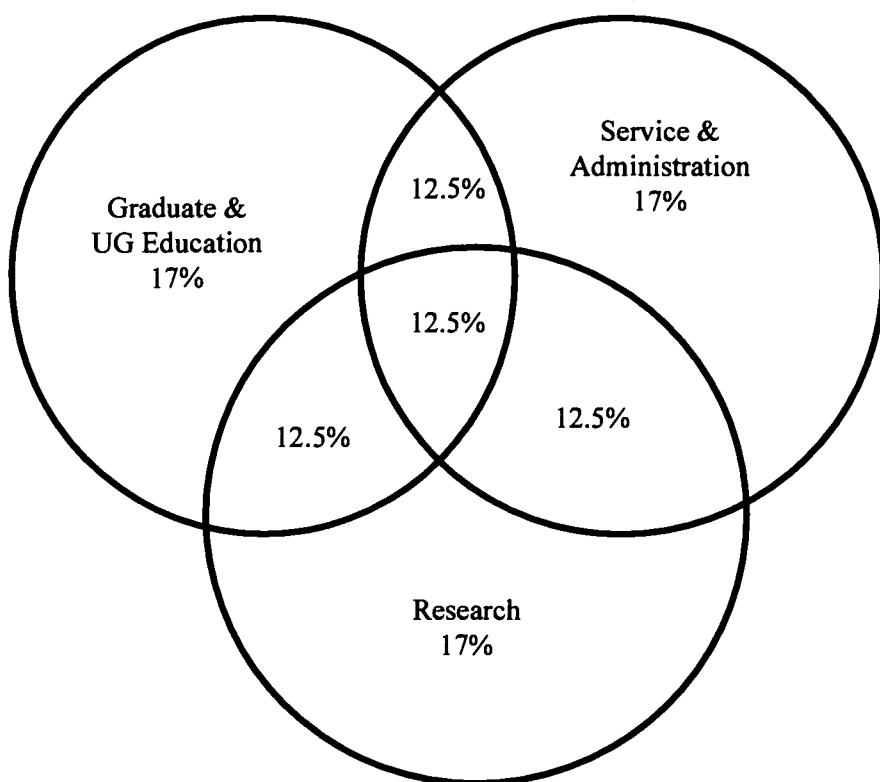
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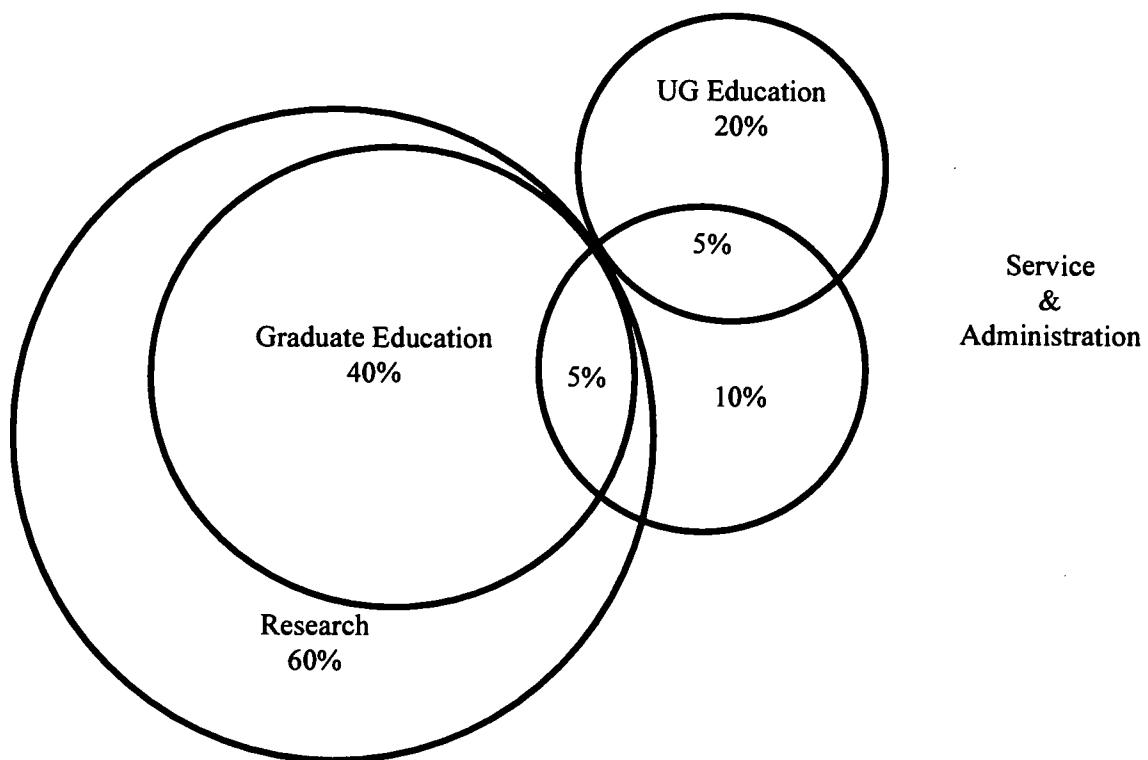
APPENDIX A-1

*Diagram of Preferred Faculty Time Allocation by Dean of Science
Metropolitan State University*



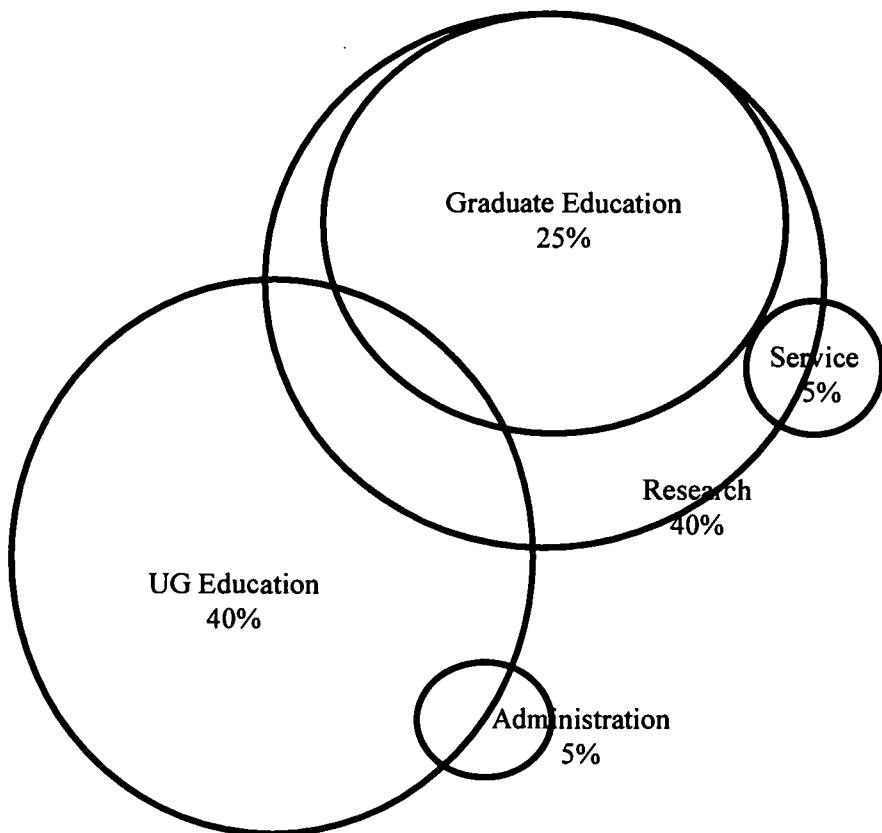
APPENDIX A-2

*Diagram of Preferred Faculty Time Allocation by Associate Dean of Science
Vantage University*



APPENDIX A-3

*Diagram of Preferred Faculty Time Allocation by Associate Dean of Humanities
Vantage University*



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